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THE USES OF SOCIAL PSYCHOLOGY IN AGRICULTURAL DEVELOPMENT

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Agricultural development in Africa, Asia and Latin America has been an important issue throughout this century, and has become a matter or urgency in recent years. I will concentrate particularly on human factors in agricultural development, and will confine my examples to two areas in sub-Saharan Africa. It is my thesis that the widely recognized lack of success of this enterprise, whether sponsored by east or by west or even by home-grown government projects, may in large measure be the product of a failure to understand 1)who is doing the farming, 2)what the farmer knows and values, 3)what resources the farmer has available, and 4)what are the demands on these resources.

Social psychology, as an isolated discipline, is not equipped to answer all these questions. There needs to be a cooperative, inter-disciplinary study of the pre-conditions and context of agricultural development in a country, in order to set development strategies and tactics firmly within the life of the people who actually do the agriculture. I will look briefly at each of the four questions before giving detailed suggestions and examples as to how social psychology can help answer them.

1. Four questions.

First--who are the farmers? It is simply not true that there is some archetypal rural farmer, peasant, native, savage, villager, tribesman, rural proletarian, sturdy freeholder or exploited mass man, multiplied in numerous copies across the land, and waiting for an adaptation of what has succeeded in Iowa or Kazakhstan or the Punjab. There are many diverse human types, personalities, abilities, interests and experiences, even in the smallest rural village. No single program can be applied to this breadth and variety of people. A certain degree of order can, however, be introduced by looking at the variety of human types in a particular area, and preparing alternative strategies for working with each of them. Each human type, moreover, is best understood in the context of all the others in his or her community, so that the resulting development policy will be a composite of policies, allowing a division of labor and differential allocation of resources among the diverse groups.

In order to understand this diversity of human types, the social psychologist can work with an anthropologist or sociologist to identify and characterize the population with whom they are working. This requires more than filling in conventional social categories--

professional, literate, traditional, working class, and the like. It requires identifying social categories which make sense to the community itself. What are the natural social divisions, and how are their members characterized--from within, not merely from without? What mobility exists between groups, short-term and long-term? What social and technical roles are played by these groups? The sociologist or anthropologist deals with these questions as a matter of course. The social psychologist can illuminate the intellectual and emotional meaning of the social categories for the people categorized.

Second--what do the farmers know and value? This depends, of course, on the particular group of farmers. Elderly widows have a quite different set of experiences and hopes from those of young couples just beginning married life. Every group has specific knowledge, experience, hopes and fears to contribute to the total mix of thought and emotion, understanding and belief of the community.

The social psychologist can study this knowledge and these values, and in so doing contribute to an effective development strategy for the community. Without such study, the people of the community may be treated merely as passive recipients of outside wisdom and assumptions, and then be expected to behave as automata, who carry out the instructions of some remote Big Brother. Community participation has been promoted as the solution to many development problems, but it must be more than community management of a policy designed on foreign soil and in foreign terms. It means building a policy within the system of ideas and beliefs of the people who must live with the consequences of the policy.

Third--what resources are available? Economists think of resources in material, quantifiable, monetized terms. Such resources are obviously important, and identifying them requires the help of economists and agricultural experts in the interdisciplinary analysis of an appropriate development strategy. There are, however, many other resources, especially human beings, who should not simply be quantified as part of a faceless labor force, but considered in terms of a total functioning social system. A sociologist can analyze the social system, and show how agriculture fits into the overall pattern, but a social psychologist also has an important role, in explaining the meaning of the system for the community itself. It is not enough to explain a system on objective functional or structural lines. It is necessarily to understand what the social system means to the

people who participate in it, if it is to be useful as an instrument for development.

Human resources include the political, the economic, the educational and all the other diverse roles which make a community function effectively. Other human resources include organizations created to serve people's special interests. Still others are public events, from rituals to meetings to celebrations. A development policy must understand what place these social roles, organizations and public events have in society, and how the people of the community understand and respond to them.

Fourth--what are the demands on the resources? The agricultural economist may think of resources in terms of his severely pragmatic discipline. A road exists for transporting agricultural inputs and products, in his view, but the people of a rural village may see it as providing consumer goods, status, easy access to the city, and medical care. A tractor, to give a second example, is often a means for transporting people and supplies rather than a means to plow fields.

Social resources likewise are subject to conflicting demands. A committee set up to allocate land in a village may in fact serve a primary function of stripping the hereditary chief of much of his power. An agricultural crop may be valued more for its alcoholic by-products than for its contribution to village nutrition. The social psychologist should attempt to explain the meaning and values attached to community resources, and thus help create an agricultural policy with a reasonable chance of success.

In summary, these four questions reduce to one question for the social psychologist who participates in a development project. What is the meaning of the set of individuals, knowledge and values, resources and demands on these resources, to the people who must live with them. Their life is not a mechanical balancing of input and output, structure and function, need and response. It is an organic, integrated way of life, wherein the superstructure of reasons and meanings is as important as, if not more important than, the economic substructure. It may be true that, in some long-range historical perspective, the material substructure has given rise to the intellectual superstructure. From the perspective of today and tomorrow, however, with their persistent demands for technological change, the superstructure now determines what changes in the substructure are possible. Understanding this interaction between ideas and social change is the job of the social psychologist.

In the remainder of the paper, I will give examples of analysis which may lead to answers to my four questions. In each case, I will give one example from the Kpelle, a Mande-speaking group of shifting cultivators of the tropical rain forests of central Liberia, for whom rice is the staple crop. I will also give one example from the Basotho, a southern-Bantu-speaking group from the mountainous country of Lesotho in southern Africa, for whom maize and sorghum are staple crops and migrant labor to South Africa the principal source of income.

2. The farmers.

There is a common assumption by outside developers that residents of rural villages are by that very fact "peasant cultivators" or "subsistence farmers". This is an over-generalization. Not every rural villager is interested in farming, and not everyone actually works at farming. It is important to know who the farmers actually are, and what attracts them to farming.

First I give some Liberian evidence. The rural Kpelle are rice cultivators, and the first impression on visiting a remote village in the Liberian rain forest is of the dominant importance of slash-and-burn farming. In fact, farming is only one of a set of activities which the Kpelle villager can undertake. Other options include hunting in the still-extensive virgin forest, participation in the local political and social elite through a variety of non-agricultural enterprises, schooling which may lead to joining the national political and social elite, cash employment on a migratory basis outside the village on the rubber plantations or in the iron mines, or migration to the towns and cities of Liberia to start a new way of life.

A series of studies which I have undertaken among the Kpelle contrast systematically several groups of people, notably male vs. female, schooled vs. unschooled, old vs. young, and resident in the central village vs. resident in the peripheral hamlets. (Gay, in preparation) Only a minority of the rural population have attended school, and they are mostly young people. There are, in addition, many children who have never attended school. Finally, most rural communities under a chief's authority have a central village, where perhaps half the population lives, and a set of very small hamlets, where the remainder of the population lives. These contrasts form a useful way of dividing the population, particularly because they are contrasts recognized by the people themselves.

In all my studies of the rural Kpelle, these subgroups of the

population show a consistent pattern on the question of agriculture. (Cont. in preparation) Those who are interested in farming are significantly more often female, unschooled, middle-aged, and resident in the peripheral hamlets. Their opposites look to other ways of making a living, whether in the village, along the road, or in the towns and cities.

In one study, I asked people to complete a set of 20 sentences introduced by such phrases as "I know that...", "I believe that...", "I am sorry that...", and "In the old days...", concerning village life and hamlet life. In the responses, males emphasize improvement of the village, schooling and modernization. Females, on the other hand, stress the fact that the village is expensive, that they can farm more efficiently in the hamlets, and that they can sell their produce in the village markets. Those who have been to school emphasize modernization and change, while the unschooled persons speak of supplying food, working hard, and living together in the traditional way. Middle-aged adults are concerned about food, family and hard work, whereas young people look for entertainment and hope for improvements in their life. Finally, the village residents mention sports, games, school, market and modernization, whereas the hamlet residents discuss food, selling goods in the village, and supplying the agricultural needs of the community. In short, agriculture is part of the traditional way of life, and not the modern world.

In another series of answers to the same 20 questions, where no topic was specified for the responses, all the sentence completions concerning agriculture are clustered with traditional responses, while schooling, wage labor and modernization are clustered together in a modern group.

It would seem reasonable that agricultural development efforts take place with the groups for whom agriculture is a salient activity. However, my experience in rural Liberia is that modernization in agriculture is all too often preached to the young, the schooled, the males and the residents of the more easily accessible villages, the very groups for whom agriculture is least interesting. It is admittedly harder for agricultural "experts", who are almost always themselves relatively young, male educated and resident in urban areas, to have rapport with older people, females, unschooled people and residents of remote hamlets, but the effort should be made, if real results are desired. Here too the social psychologist can be helpful. Not only can he identify the preferred target groups, but also he can help to interpret them to the outside technicians.

I turn now to Lesotho. My example here concerns that small proportion of the population who farm well. I estimate, on the basis of my village studies, that not more than 5 percent of the rural households farm effectively, producing enough food to feed themselves as well as a surplus to sell. The great mass of the population farm in a desultory fashion, produce pitifully small crops from their eroded, overgrazed and infertile fields, and turn to migrant labor for approximately 90 percent of their income.

Lesotho has a reputation for being a highly egalitarian country. In particular, every adult married male has in theory access to three fields. In fact, however, because of overpopulation, most men have to wait until they are in their 40's or 50's before they have their full complement of fields, if in fact they ever receive them. And yet, the great majority of families have some cultivable land, with a national average of about 2 hectares per household. About half the households have livestock, and most have access through their neighbors or relatives to enough oxen to plow the fields before the spring planting of maize or sorghum.

However, for a variety of reasons, the great majority do not appear to take advantage of this egalitarian situation. Only a few work hard and seriously at being farmers, while the rest produce very little from their allotment of fields. The social psychologist can help the agricultural developer understand this situation, and also help him locate those farmers who can most benefit from outside assistance.

In my research, I found several features which seem to characterize the attitudes of the better farmers (Cohen, Gray and Kumar, 1978). They believe their soil quality is improving, and in fact they get far higher production than those who do not note improvement. They attribute this improvement to good farm management, and believe that by their own efforts they can go on improving their farming. They are generally more willing to try new approaches than the ordinary farmers and they give coherent reasons for wanting these innovations. They are also willing to try to solve their problems, whereas the ordinary farmers tend to let them slide, doing little or nothing to prevent insects or erosion or disease. They are more individualistic than the others, and reject such corporate practices as communal grazing on harvested fields. Finally, almost to a man or woman, they want their children to remain farmers, rather than going away to the South African mines or to urban employment in the towns and cities of Lesotho.

My observation shows that farmers in these households evidently enjoy farming. This may seem a strange feature to identify, but it provides a real contrast with other households, and the overall difference between the two groups in Lesotho provides a striking contrast with agricultural societies elsewhere. I have seen the better farmers laboring to rebuild and improve their cattle kraal near their house, carrying cartloads of manure to their fields, walking in the evening to see how the crops are growing, and even leaving social gatherings at their own house to check the condition of their cattle. This level of concern is simply not present among the ordinary farmers in Lesotho.

Not only the better farmers are of interest to the agricultural developer. Perhaps they should better be left alone. They are doing a good job already, and to the best of my understanding, they are often better farmers than visiting experts hired at great cost by international aid agencies. At least, they are able to obtain a net profit, whereas I have personally known only one foreign expert in Lesotho who could produce crops equivalent in value to the amount he spent on inputs!

The agricultural developer should perhaps work primarily with persons who have land, cattle and tools, but who are using them to very poor advantage. If they are to improve the production from their fields, they need help--but it must be specified exactly what help they need, what help they are willing to accept, and what work they are willing to contribute. In my surveys, I have found three important groups who need help. There are widows who are unable to manage their land, since they have neither the labor nor the equipment to do the job. There are young married couples, where the husband has gone to the mines, and the wife is struggling with minimal resources to raise young children and take care of household and farm. And there are families who perhaps have a field or two and some garden crops, but who have chosen other occupations, such as constructing houses, selling goods in a local café, teaching school, brewing beer for sale in the village, or making handicrafts for sale. Each of these groups has special resources, special desires and special needs. The social psychologist can help identify their resources and needs, so that agricultural developers can prepare a specific aid package for each type of farmer.

This package can include strategies that the Basotho have worked out for themselves. Some of the better farmers are already leasing

fields from old widows, or else sharecropping with them to produce far better crops than the widows could produce alone. Such strategies cannot, however, be imposed. They must be worked out from within the communities involved.

The sad thing I have seen in so much rural agricultural development in Lesotho is that outside developers have ignored social differences. Foreigners, and even government officials, look at the land rather than the people that occupy the land, and devise policies that ignore the predispositions of the people. They then despair, and begin to wish they could farm the land without involving the people at all. The result is typified by one woman who told me that the government had planted and cultivated the wheat on her field, and now should harvest it. The time was already three months after normal harvest time, and it was evident that she had been forgotten, but she preferred to let the wheat crop be ruined. Such situations are the result of imposing irrelevant policies on uninterested people. My point is that relevent policies do exist, and can be discovered by understanding the people.

3. Knowledge and values.

All too often farmers' knowledge and beliefs are ignored, or at best considered a mere crude approximation to what they are supposed to know and believe. The practice of wiping the mind clean before imposing western values and ideas began with the missionaries in pre-colonial and colonial times. To a large extent, missionary organizations are now moving beyond that practice. It would be unfortunate if secular development organizations were to continue to emulate the bad old days.

I give an example of farmers' knowledge from Liberia. The Kpelle of Liberia grow rice as their staple crop, and as a result they know rice intimately and carefully. Foreign experts have attempted to introduce new varieties of rice into Liberia, all too often without inquiring into existing knowledge of rice varieties.

In a study of Kpelle knowledge of rice varieties, I found a remarkable degree and range of knowledge. This was particularly true among older non-literate women, as one might infer from the differences previously mentioned among the various population groups.

The study began from my attempt to collect as many traditional rice varieties as possible. The United Nations had called for a genetic bank of all customary crops to be set up, so that if modern varieties were to develop unforeseen difficulties, it would be pos-

sible to modify them with other genetic strains. I was able, in one remote village of 50 households, to locate over 120 different rice varieties, known by name and characteristics. There was partial disagreement on the actual names, but the varieties were recognized by many people, especially the old women who select the seed at the end of the previous harvest and broadcast the seed at the time of the next planting.

I selected the 50 most familiar of these varieties. I asked two persons at a time to sit, back-to-back, and describe rice varieties to each other. Each person was initially given examples of 25 varieties, and the first person had to describe them so that the second could pick them out. Then each person was given examples of the remaining 25 varieties, and the second person described them to the first. I recorded the descriptions as given by the "sender" and the varieties selected by the "receiver" on the basis of these descriptions.

In general, the older non-literate women were very good at the task of communicating and selecting rice varieties. Some were able to perform the task essentially without error. The "senders" would give names as well as two or three salient features of each variety, such as the color of the husk, the location of the hairs at the tip or side, and the length of the grain.

Young men, on the other hand, did very poorly. Most refused even to attempt the task, and those who did attempt it gave few correct features of the rice and made few correct choices of varieties. Only one pair of men did a good job. Significantly, they were non-literates from a remote hamlet, further confirming the group differences I mentioned above.

These indigenous rice experts know where each variety should be planted, in what soil, whether early or late, with how much water, and with how many months until harvest. Competence in rice identification goes along with competence in growing rice. Women plant rice to take advantage of the soil, available water, terrain, and date of harvest. They want to make sure both that all the rice in a given area can be harvested at the same time, and also that not all the rice in the entire village is ready to be harvested at once, so that there is a space of time during which the women can cooperate to help each other harvest, without any family having its rice remain on the field too long.

Despite the expertise of older non-literate women, outside developers still tend to bring new rice varieties to young literate

men in accessible villages. In my experience, when these men bring home samples of new types of rice, their wives politely accept these unfamiliar varieties, but, more likely than not, the rice goes into the soup pot instead of being planted. It should be stressed that this is a perfectly rational response, because the women do not know how and where the new rice grows, what soils it prefers, what water it requires and how long it takes to mature. Perhaps the foreign experts told their husbands the details, but the husbands are not accustomed to dealing with such matters, and most likely bring home an inadequate and garbled version of the information.

It would be far better to let these women work on experimental plots near their usual fields so that they can become familiar with the new varieties by planting, weeding and harvesting them. In this way, the women can make a rational choice of which varieties to use. As a result, the real test of the new varieties will be made, not by scientists but by the actual users, who must live with the rice for the long-range future.

I turn now to Lesotho, and give the example of the values attached to sorghum-growing among the Basotho. Values are as important as knowledge, because what people do is dictated to a large extent by what they believe in.

Some foreign experts consider sorghum to be a marginal crop in Lesotho. Little sorghum is sold on the public market. It forms a relatively minor part of the diet, in comparison with maize which is the basic staple (Grimes, Guy and Kinman, 1934). Moreover, much of the sorghum crop is converted to sorghum beer, a mildly alcoholic drink commonly sold in the villages either in its basic form or varied by adding hops, pineapple or raisins.

Yet sorghum continues to be planted by many farm families. In two villages where I did intensive work sorghum was planted on approximately 30 percent of the fields. And in another survey, conducted in six widely dispersed areas of Lesotho, sorghum was listed as the crop most often planted by more than 20 percent of the households (Wilkin, 1980).

It is important to understand the values which are attached to sorghum in order to understand why it is so widely planted, even though it is not as significant in the diet as other crops. First, it is the oldest Basotho crop, antedating maize, beans, peas and wheat. None of these other crops, with the exception of traditional

forms of beans and peas which differ from the present cash crops, are earlier than the late 18th century (for maize) and the mid-19th century (for wheat, beans and peas). On the other hand, sorghum was apparently carried by the Basotho as they moved first into what is now the southern Transvaal and the Orange Free State and then later into Lesotho.

Second, the most traditional foods of the Basotho are made with sorghum, even though they are not so commonly eaten now as maize porridge and wheat bread. One study I conducted brings out their traditional character very clearly (Gay, 1977). I asked persons to give free responses to a list of terms related to farming. I then used cluster analysis on the results to reveal the underlying taxonomy of the responses as well as of the original terms. The taxonomy includes a separate group of five terms referring to sorghum cultivation and foods. None of these terms could be translated easily into English, whereas almost all the other responses could be translated with little difficulty.

Third, sorghum is essential in Basotho rituals, particularly as they involve women. The most basic use is in the form of sorghum beer. This drink is not, as outsiders often imagine, just a way to escape the troubles of the day. It is used ritually in births, marriages, occasions of reconciliation, burials and ancestral feasts. For instance, when a family honors a recently dead member, an ox should be slaughtered by a senior man of the family and the cooked meat distributed to members of the community. There must also be sorghum beer, brewed by the women of the family. The beer is drunk at the feast, but before any is swallowed, a mouthful must be spat on the ground to satisfy the ancestors.

Fourth, sorghum has an underlying symbolic significance for the Basotho. For instance, the Sesotho verb for fermenting sorghum is also used for covering the stomach of a woman pregnant for the first time. Sorghum is related to the life and growth of women, particularly as they fulfill themselves in childbirth. The social psychologist can make an important contribution to understanding the symbolic and ritual functions of a crop, as opposed to the merely economic and material use.

4. Resources.

The third question concerns the resources available to the community. In my examples I will consider from the point of view of the rural village human resources which the economist may see only in

terms of labor statistics. I will consider specifically the social structures that can be used in development projects, and look at their meanings for the people for whom they are a way of life.

I did a detailed study of the leadership of the same rural Kpelle village (Gay, in preparation). I asked 25 questions concerning the persons within the community who are good farmers, know the forest, decide court cases well, and the like. I wanted to understand who holds authority and influence within the village, not so much to learn the names of particular individuals, as to see the underlying structure and system. In the old stereotype of colonial and missionary days, the white stranger would ask, "Take me to your leader." My point is that there never is a single leader, because leadership is a diffuse and complex matter, even where there is a hierarchical political system, as is the case among the Kpelle. Where the traditional pattern is acephalous, as is the case in such other African groups as the Kru of Liberia or the Igbo of Nigeria, the situation is even more complex and requires close study.

In the case of this Kpelle village, more than 20 percent of the population were named in response to one or more of the questions. Even after eliminating persons named only once, I still had a list of 63 persons, who shared in some way in the leadership of the village. My respondents, of course, named certain figures far more often than others, such as the village elder, the village chief, the leader of the Muslim quarter, and the leading blacksmith. These leading figures were only named as part of a system of shared leadership, wherein a division of labor allocates functions throughout the adult population.

I used the technique of cluster analysis to sort the names according to the number of times they appeared in response to each of the 25 questions. The resulting hierarchy mirrored the actual leadership structure of the village. There were two basic groups, traditional and modern. Each of these groups then subdivided into some persons noted for their wisdom and counsel. The active leaders in the traditional subgroup included the political leaders, family heads, secret society leaders, entrepreneurs and leading farmers, whereas the active leaders in the modern subgroup included young literates, migrants into the towns and cities, and political appointees from outside the village. The traditional counsellors included elder citizens and traditional healers, while the modern counsellors included only medical and paramedical personnel.

This pattern of division of authority and responsibility in the village is further reflected by using multi-dimensional scaling on the persons named. There are two clear dimensions in the resulting 2-dimensional plot, namely, the traditional-to-modern dimension, and the power-to-wisdom dimension.

Such analysis will enable the developer to know what persons can be expected to respond to a particular initiative. There is no single leader, who responds equally to new ideas concerning agriculture, sanitation, schooling and religion. Rather, the power and wisdom of the village must be consulted in a variety of ways, depending on the issue at hand. Just to seek for "the leader" is to miss the opportunity of real access to the community leaders.

The example of social resources from Lesotho concerns organizations in the rural villages. Such organizations exist in every society, and they can be used to mobilize the community for a given purpose. However, they cannot be presumed as a mechanical means for contacting and organizing the people. Their individual meaning and function must be understood first.

The basic form of meeting in Basotho society is the pitso, which literally means "a calling together". It is an occasional assembly or meeting of the people of a village or group of villages or a whole chiefdom or even the entire nation, called for a particular and immediate purpose. It is led and moderated by the most important chiefs present, and any adult has the right to speak. Traditionally, only males spoke, but increasingly today women have the right to contribute. It is an ancient system, and continues to function actively at the present time. It has been used throughout history as an instrument for government to communicate with its people and for the people to express their views to government.

The important point to realize, however, is that the pitso is not an ongoing organization designed to take action. It has no officers, no regular meetings, no structure for carrying out resolutions. Decisions may be taken at a pitso, but their implementation is not assured by the meeting itself. If a decision is taken, and if it is considered sufficiently important to be acted upon and not merely to remain a pious wish, then another body must be delegated the responsibility of executing the decision.

In the villages where I have worked, there are a wide variety of specific organizations. Some of the most common are Farmers' Associations, Credit Unions, Village Development Committees, Water

Committees, Road Committees, Land Allocation Committees, church groups, burial societies, beer-brewing groups, communal garden groups and craft groups. Some of these have had long histories, while some have existed only a short time. Some function well, and some rarely meet. The effectiveness of a particular group varies from village to village, moreover. I have seen Credit Unions which functioned effectively and creatively, and I have seen them trying to survive (and failing) in villages where no one felt he could trust the leaders.

In some cases organizations divide the community more than they unite it. Lesotho is a highly politicized country, with two main political parties which have been warring ever since independence in 1966. It may be, for instance, that particular churches are identified with particular political parties, and as a result there is little to be gained by attached a development project to one church instead of another, where such a rivalry exists.

If the pitso appears to approve a particular course of action, it is thus necessary to go beyond the pitso to an organization which will attempt to put the decision into practice. However, it is also necessary to make sure of the place of that organization within the village. Its meaning and function and membership and history are crucial factors. The social psychologist is in a good position to help the developer know how to work with such groups by understanding their meaning, functions, inner dynamics and group process.

5. Demands on resources.

The question of the demands which a society places on its resources is a world-wide problem, not merely a problem of developing countries. For instance, it is reasonably clear that the United States is spending its available energy resources at a reckless pace, but it is also clear that the nation has little interest in changing its ways. Allocation of resources takes place for many reasons, and economic rationality is only one of them.

Time is a principal resource of every society. I will consider Kpelle concepts and use of time, as my example of the allocation of a scarce resource. Outsiders often accuse societies like the Kpelle of having no idea of time, of wasting time, of not being able to operate according to a strict schedule. To the best of my understanding, this is nonsense when applied to the Kpelle, and probably nonsense when applied to any society in the world. The perception of time is a constant throughout human society. The variable is what is done with it.

That the Kpelle perceive time in the same way as we in the west is the burden of one study I did in Liberia (Gay and Cole, 1967). Kpelle non-literate adults were asked to estimate mentally a time-interval equal to one demonstrated to them. They were just as able to estimate the interval correctly as persons from literate time-conscious America--and this despite the fact that there is no traditional Kpelle word for time! Time perception is clearly not the issue.

The ability to appear on time for what is important to the Kpelle is also not the issue. The cooperative work groups in the village where I worked depended on the entire group being present when they cut the forest or planted the rice or harvested the ripened crop. And it was my experience that people were quite able to appear on time to join the work group when the day's activities began.

Moreover, the problem is not one of scheduling events. These cooperative work groups meet regularly at the beginning of the farming season to decide when each member's farm is to be cleared from the forest or bush that covers the site. The decisions that are made are based on the type of forest or bush to be cut, the type of soil on which the rice is to be planted, and the type of rice which is desired by the women of the household. Certain types of bush must be cut very early in order to allow them to dry properly before burning, whereas others should be cut late to prevent grass and underbrush from springing up again and hindering the growth of the rice. Certain types of soil must not be allowed to dry out, thus arguing for late bush cutting, while others are too damp and can benefit from a period open to the sun. Certain types of rice require long growing seasons, and should be planted early, while others become ripe in a short time. Another factor is the sensitivity of the rice variety to the sun of the late dry season or to the continual damp of the full rainy season. All these factors enter into the decision of when to clear the bush. These and similar factors, moreover, are factors when deciding the dates of burning, planting and harvesting the rice.

In actuality, there is no problem of time. Kpelle views of time are not significantly different from western views of time. It is only the demands placed on time that differ. I have mentioned some of these demands in my comments about the different events within the rice cycle. However, there are other demands which appear equally important to the Kpelle. They include, most significantly, the timing

of events in the secret societies. The initiation ceremonies of children traditionally take place during the dry season, and must be calculated according to the moon, the completion of the previous harvest to ensure available food, related events in other villages, and the availability of society leaders. Specifically, beginning the new rice farming season must take second place, in order that the basic ritual events are completed satisfactorily.

The social psychologist is in a position to explore the meaning and use of time in a society different fro his own. In so doing, he can explain the concept of time to developers, who are all too ready to accuse the people with whom they work of shiftlessness, time-wasting and incompetence.

I have seen this also in Lesotho, where agricultural developers may arrive in rural villages at 10:30 a.m. on a summer morning to observe plowing activities. This is a reasonable time from their point of view, since they had to go to the office first, check their mail, sign the logbook, leave work for the secretary, find a driver and then depart for the village. They arrive to find the village men and women sitting at home, perhaps drinking sorghum beer, perhaps puttering around the house. They return to their urban office, incensed at the laziness and poor farming of the Basotho, not realizing that in fact many of these very families have already finished a day's plowing. They took the animals from the kraal at 2:00 or 3:00 a.m., led them to the fields in the moonlight, let them graze briefly, yoked them, and began plowing just at dawn. By 10:00 a.m. the sun is hot and the animals are tired, and must be allowed to graze for a full meal. It is the developers who are not on time!

A second example of the allocation of resources is the Basotho use of cattle. The importance of cattle to many African societies is well documented, and Lesotho is no exception. Unfortunately, developers have not sufficiently recognized the relation between two complementary sets of ideas. Cattle are seen on the one hand as economic wealth, which is useful in plowing, providing milk, and eventually providing income through sale or slaughter. On the other hand they are seen as social wealth, which is useful in marriage transactions, feasts for ancestors and a general sense of well-being.

For the Basotho male, cattle are a pervasive element throughout his entire life. As a small boy, he has his first introduction to cattle when he goes with his father or older brother to the kraal in the center of the village. He graduates to caring for calves

which must remain in the village while the mature animals go to pasture. At the age of 6 or so, he may go out to the fields to help his older brothers and their friends, and finally when he is 8 or 10 he cares for cattle himself. At about the age of 12, he may be sent to the mountains to watch the family animals for the long summer season. He lives there for several summers with only dogs, cattle, sheep and goats, and a few other herdboys as companions. By the time he is 16 or so, he is ready to learn to plow, and he uses the close relation he has built up with the cattle as the means to enable him to yoke, lead and control the animals. He sings and whistles to them, and treats them almost as his brothers and sisters. When he is old enough to marry, cattle (or their cash equivalent) are paid to the family of the girl who is selected for him. Cattle thus become not only the instruments of production through plowing but the instruments of reproduction through bridewealth. As a man, he may go to the mines in South Africa for many years of hard labor, trying to build up his family resources, among which cattle are pre-eminent. He is offered animals for sale outside the mine gates in South Africa, usually at highly inflated prices, by whites who have bought the same animals as culls from white farms. He is glad to have the chance to buy them, because if he took money home instead, it would be dribbled away in gifts and loans and parties. An animal, however expensive, is not subject to the same distribution to a hundred relatives. Thus he returns with his cattle through the border post dividing Lesotho from South Africa, and drives them to his home. They join the family herd, enhance his own status, and make it more possible for him to plow his fields, make sacrificial feasts when his own parents die, complete his bridewealth payments, and eventually find wives for his own sons. And finally, when he dies, an ox will be slaughtered, and its skin given in his honor as a blanket to keep him warm in the next world.

In such a setting, it is not surprising that the Basotho turn deaf ears when foreign agricultural experts suggest that their livestock should be managed as an economic resource. There should be fewer cattle with higher quality, say the experts. Nonsense, say many Basotho. Fewer cattle are fewer cattle, no matter of what quality. Imports of cattle should be controlled, to prevent overgrazing, say the foreigners. This is equally objectionable, since every man needs cattle, and none wants to be the victim of import control. Old animals should be fattened and slaughtered commer-

cially, according to economic wisdom. This too is unacceptable, since eventually the family will need to slaughter the animal for a feast, and old animals are retained almost as surrogate members of the family for such occasions. Debate between the two parties is the classic dialogue of the deaf, since they do not share assumptions on which to build solutions to the problems which each party has.

The social psychologist can provide a sensitive interpretation of the issues and talk to both parties. It is not enough, of course, for the middle man merely to be a salesman for the foreign experts or an apologist for the local tradition. Rather the social psychologist should try to understand both parties, and realize that both are part of the problem and part of the solution. The social psychology of international aid experts and government bureaucrats is an important subject in its own right. If the social psychologist is clever, he can understand both parties, and thus find a way to mediate, to achieve some sort of genuine compromise and mid-position. Only in this way can both parties be in some measure satisfied.

In summary I have proposed four areas in which social psychology can benefit the agricultural development process. I have discussed the farmers, what they know and value, the resources they have, and the demands placed on those resources. Insensitivity and incomprehension of these four issues can and often does lead to frustration and failure. It is very easy to list foreign aid projects which have failed. In fact, it is easier to list failures than successes. I claim that these failures may in large measure be due to failure to deal with these four issues. Understanding what is involved will not, of course, necessarily lead to success. On the contrary, such understanding might lead to changing plans or even giving up entirely a particular project. But surely shifting direction is better than marching into certain defeat. Social sensitivity is a necessary, but not sufficient condition, for effective development aid. What the sufficient conditions are--I do not know.

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